

**ABSTRACT**

The invention relates to the fields of biology, genetics and medicine. The invention describes methods and compositions enabling (1) the identification of suppressor T cells or lymphocytes (Ts) or the precursors thereof (pTs) for diagnostic or therapeutic purposes and for carrying out genomic or proteomic studies, particularly for the identification of novel markers and/or therapeutic targets for said cells; (2) the production of suppressor T cells or lymphocytes (Ts) or the precursors thereof (pTs) and/or the manipulations thereof in vivo or ex vivo for controlling various pathological conditions, including diseases associated with abnormal activity of effector and/or regulator lymphocytes. The invention relates to the preparation of said compositions based on Ts lymphocytes and pTs, and to the use thereof in cell therapies. The compositions or cell populations based on Ts lymphocytes and pTs obtained according to the invention are particularly suitable for the treatment of tumors, autoimmune diseases, allergies, graft-versus-host disease, graft-versus-infection effects (GVI) or graft-versus-leukemia effects (GVL), inflammatory diseases, type 1 diabetes, viral, bacterial or parasitic infections, for immune reconstitution or for induction of tolerance in the event of transplantation of stem cells, tissues or organs in a mammal.